



ECO GUIDE TO Capturing Coordinate Data

When you've made the effort to collect important information about your trees and/or plots in the interest of better project management, it can be helpful to know exactly where those trees and/or plots are. It is possible to collect coordinate data for trees in i-Tree Eco inventory or plot sample projects, and for plot centers within plot sample projects. This can be accomplished using the Mobile Data Collector (MDC), which is a feature of Eco that allows users to gather data using any web enabled device, such as a smart phone or tablet. It is also possible to enter coordinate data manually within the MDC and the i-Tree Eco software.

Set Up

To collect location data in your i-Tree Eco project, this option will need to be selected on the Data Collection Options page, which can be found under Project Configuration > Project Definition. This can be done during project set up, or at any time after that. If data collection options are changed after a project has been set up, please ensure that all data being collected with the MDC is submitted and retrieved prior to making changes.

After turning on the option(s) to collect GPS location data, the project will need to be submitted to the mobile device you'll be using (if that is the chosen method of data collection).

Using MDC to Collect Location Data

There are three options for collecting coordinate data:

Type in coordinates, use the device GPS, or tap a location on the map.

Option 1: Type in Coordinates.

Type in the **Latitude** and **Longitude** coordinates in the appropriate boxes.

The screenshot shows the MDC interface for 'Plot 1 - Map Co...'. It features three main options for data collection:

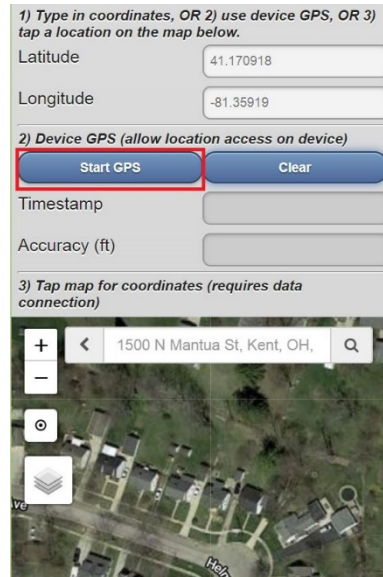
- Option 1: Type in coordinates, OR 2) use device GPS, OR 3) tap a location on the map below.** This section contains input fields for Latitude (41.908656011) and Longitude (-84.0385827151), which are highlighted with a red box.
- Option 2: Device GPS (allow location access on device).** This section includes 'Start GPS' and 'Clear' buttons, and fields for 'Timestamp' and 'Accuracy (ft)'.
- Option 3: Tap map for coordinates (requires data connection).** This section shows a map view of a residential area with a search bar containing '1500 N Mantua St, Kent, OH'.

The format for entering coordinates manually is as follows:

Latitude	Decimal degrees (0-90) with direction (35.34642345N)
Longitude	Decimal degrees (0-180) with direction (98.34642345W)

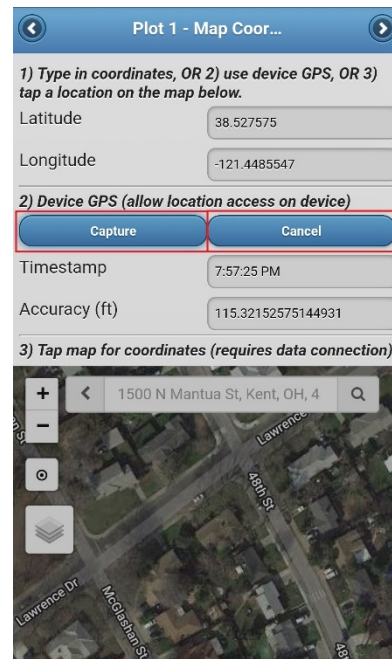
Option 2: Use the Device GPS.

Click **Start GPS** to begin satellite acquisition. A rough latitude and longitude will appear, together with an estimated accuracy. It can take up to several minutes for a sufficient number of satellites to be acquired to reach acceptable accuracy.



Option 2: Continued.

Once the data meet your acceptable level of accuracy, click **Capture** to save the coordinates. If you want to stop this action click **Cancel**.





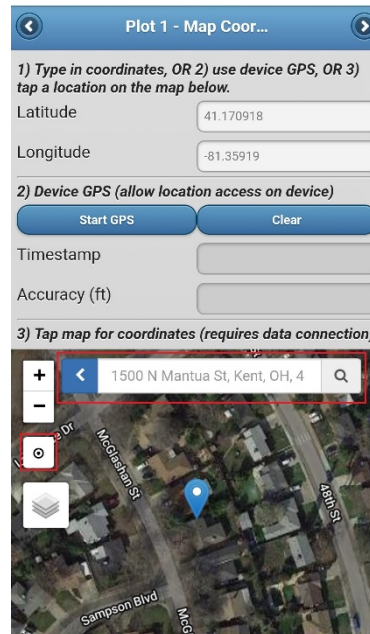
Caution

It can take up to several minutes for a sufficient number of satellites to be acquired to reach acceptable accuracy.

GPS accuracy depends on your device, its connectivity, and environmental factors. Consult with the device manufacturer for more information.

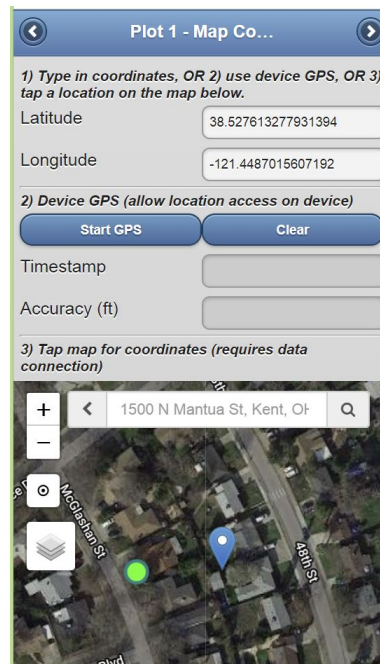
Option 3: Tap On The Map.

Enter a location in the **search bar** or click the **location button** on the map. A blue location marker will then be visible indicating where you are on the map.



Option 3: Continued.

Tap on the map to indicate the location of a tree. A solid green circle icon will appear on the map, and the coordinate boxes will be populated with the applicable coordinate data.

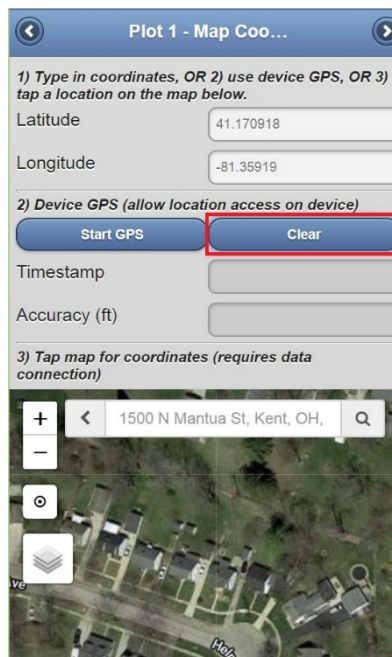




Tip

Depending on the GPS accuracy of the mobile device, post processing to correct point locations on a map may be necessary. To increase accuracy, consider using an external GPS receiver.

For all three options, if you would like to delete the coordinates, click **Clear**.



Requirements for GPS Devices

Smartphones, tablets, and other web-enabled mobile devices:

- A web browser with HTML-5 compatibility (most recent versions of Chrome, Firefox, and Safari are compatible; IE 9 and 10 have limitations)

The mobile data collection system available in i-Tree Streets and Eco is designed to work with newer web-enabled mobile devices. This is not an app or program that is loaded on a smartphone. The mobile web form system runs on a device's web browser and relies on internet connectivity, web browser functionality, and device data caching capability.

Newer iPhones, iPads, Android and other devices are HTML-5 compatible and have data caching capabilities that allow for data collection to continue if internet connectivity is disrupted

in the field. Some devices such as Windows Phone 7 smartphones and older devices are limited and will require continuous connectivity to advance through the online web forms.

You can also test your device's capability for data collection using one of the example data collection links on the **Mobile Data Collection page**. Change to airplane mode after entering data for a tree to see how the browser will function when connectivity is lost.

For information concerning how to use the MDC please see applicable pages in the Eco User Manual, Eco Field Manual, and applicable videos on the **support web page**.